<u>AMENDMENTS TO THE CLAIMS</u>

1.   (Currently amended) A system for determining the type of vehicle traversing terrain from acoustic and seismic noise emitted therefrom, comprising:

an array of unattended detectors spaced about said terrain;

a module at one of the detectors for ascertaining absolute acoustic and seismic noise levels thereat and for determining vehicle type from a pair of acoustic and seismic noise levels, said absolute levels being derived from measuring said levels at a number of times and from ascertaining the distance of said vehicle to said one detector for each level measurement.

2.   (Cancel)

3.   (Cancel)

4.   (Cancel)

5.   (Currently amended) The system of Claim 4-1, wherein said levels are determined from an exponential decay function having an exponential decay α derived from said measurements.

6.   (Original) The system of Claim 5, wherein the alpha for seismic noise is determined.

7.	(Original)	The system of Claim 6, wherein the α for near field and for field distances from said vehicle are determined separately.

8.	(Original)	The system of Claim 6 wherein the absolute seismic levels for near and far field distances from said vehicle are determined separately.

9.	(Currently amended)	The system of Claim 4 1, and further including at each detector an array of microphones, a bearing line processor for determining the bearing to said vehicle, and means for transmitting the bearing to a remote location;

a position determining processor for ascertaining the position of said vehicle therefrom; and,

a transmitter at said remote location for transmitting the position of said vehicle to said one detector.

10.	(Original)	The system of Claim 9, wherein said one detector includes a vehicle type processor and a transceiver connected to said vehicle type processor for receiving the position of said vehicle and for calculating the absolute value of said noise and the appropriate exponential decay constant, and for determining vehicle type therefrom.

11.	(Original)	The system of Claim 10, wherein said transceiver transmits the probability that said vehicle is of a predetermined type to a predetermined location.

12.   (Currently amended)   A method for ascertaining the class of vehicle transiting an unattended detector array comprising the steps of:

determining the position of the vehicle from acoustic noise from the vehicle arriving at at least two detectors of said array;

detecting the absolute noise level of noise generated by the vehicle at one of said detectors based on the determined distance of the vehicle from said at least one detector; and,

determining the likelihood that the vehicle is of a predetermined class based on the absolute noise level, the noise being seismic noise and the absolute noise level being dependent on the terrain over which the vehicle is transiting, the absolute noise level being dependent on an exponential decay function relating to the distance from the vehicle to the associated detector, the exponential decay constant being dependent upon the terrain.

13.   (Currently amended) The method of Claim 12, wherein the noise is also acoustic noise.

14.   (Cancel)

15.   (Currently amended) The method of Claim 14 12, wherein the seismic noise is near field noise.

16.   (Currently amended) The method of Claim 14 12, wherein the seismic noise is far field noise.

18.	(Cancel)